BOARD OF COUNTY COMMISSIONERS
AGENDA ITEM SUMMARY

Meeting Date: December 17, 2003 Division: Public Works

Bulk Item: Yes X No _____ Department: Engineering/ConstructionManagemet

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AGENDA ITEM WORDING: Approval of Contract Amendment with Harvard Jolly Clees Toppe Architect, P.A. for Professional Services to redesign the Medical Examiner's Facility.

ITEM BACKGROUND: The existing contract calls for a design based on 155 MPH sustained winds. This has added $160,000.00 - $200,000.00 to the project cost. Additionally, it is doubtful that all building components will actually meet this high standard. During design, the County has revised its policy on wind load requirements – changing it back to ASCE 7 for 150 MPH 3 second gust. By redesigning this project based on the revised policy we will save $160,000.00 to $200,000.00 in construction costs.

PREVIOUS REVELANT BOCC ACTION: On January 16, 2002, BOCC approved the contract with Harvard Jolly Clees Toppe Architects, P.A., to perform architect/engineering services for the Medical Examiner's Facility for a fee of 6 ¾% of the estimated construction cost, $2,000,000.00. Fee = $135,000.00.

CONTRACT/AGREEMENT CHANGES: Amended contract for the redesign of the Medical Examiner's Facility to meet the wind load requirement of 150 mph as defined in the current Building Code.

STAFF RECOMMENDATIONS: Approve as stated above.

TOTAL COST: $29,691.00 **BUDGETED:** Yes X No _____

COST TO COUNTY: $29,691.00 **SOURCE OF FUNDS:** Bond Proceeds Fund 307/26501-560620-CH0301

REVENUE PRODUCING: Yes _____ No X **AMOUNT PER MONTH**_____ **Year** _____

APPROVED BY: County Atty _____ OMB/Purchasing _____ Risk Management _____

Item Prepared By: _____ _____
Stephanie Coffey, Construction Manager David S. Koppel, P.E., County Engineer

DIVISION DIRECTOR APPROVAL: _____ for Dent
Dent Pierce, Division Director

DOCUMENTATION: Included X To Follow_____ Not Required_____

DISPOSITION:_____ **AGENDA ITEM #** C20

MONROE COUNTY
ENGINEERING/CONSTRUCTION MANAGEMENT
CONTRACT AMENDMENT NO. 1

PROJECT TITLE: Medical Examiner's Facility

CONTRACT AMENDMENT NO: 1

Total Previous Amendments	0.00	
Original Contract Amount	$135,000.00	(6.3/4% of $2,000,000.00)
Revised Contract Amount	$164,691.00	

Detailed description of Amendment and justification:

Amend Contract with Harvard Jolly Clees Toppe Architects, P.A. for Professional Services to redesign the Medical Examiner's Facility to meet the wind load requirements of 150 mph as defined in the current Building Code. The scope of the required changes is included in the attached proposal. The cost associated with redesign ($29,691.00) is negligible compared to the expected construction cost savings estimated to be $160,000.00 to $200,000.00.

ARCHITECT: Harvard Jolly Clees Toppe Architects Date 11/25/03

CONSTRUCTION MANAGER: Stephanie Potter Date 11/24/03

COUNTY ENGINEER: David S. Koppel, P.E. Date 11-24-03

DIRECTOR OF PUBLIC WORKS Dent Pierce Date

COUNTY ADMINISTRATOR James L. Roberts Date

MONROE COUNTY
ENGINEERING/CONSTRUCTION MANAGEMENT
CONTRACT AMENDMENT NO. 1

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ARCHITECT: _____
Harvard Jolly Clees Toppe Architects Date

CONSTRUCTION MANAGER: _____
Stephanie Coffer Date

COUNTY ENGINEER: _____
David S. Koppel, P.E. Date

DIRECTOR OF PUBLIC WORKS _____
Dent Pierce Date

COUNTY ADMINISTRATOR _____
James L. Roberts Date

MONROE COUNTY ATTORNEY
APPROVED AS TO FORM:

ROBERT N. WOLFE
CHIEF ASSISTANT COUNTY ATTORNEY
Date 11-25-03

CMD007—1/3/97

HARVARD
JOLLY
CLEES
TOPPE
ARCHITECTS, P.A.
A I A

April 30, 2003

Ms. Stephanie Coffer
Director of Construction and Planning
Monroe County
1100 Simonton Street
Key West, FL 33040

Re: Monroe County Medical Examiner's Facility
Crawl Key, Florida
HJCT Comm. No. 01160

Dear Ms. Coffer:

This letter is in response to our telephone conversation regarding additional construction costs associated with increasing the 3-second wind gust pressure from the code required 150 mph to the requested 190 mph (see attached letter from Jorge Fernandez dated 4-24-03).

Many components of the building will be affected by this increase. While the main cost escalation will be in the structure of the building, other affected components include roofing, sheathing, windows, doors, hardware, soffits, etc. Accordingly, we estimate an increase in construction cost from $160,000.00 to $200,000.00.

It is our understanding that when the Florida Building Code took effect in early 2002, it superseded all other code and code modifications. Accordingly, you may want to verify if your previously adopted code modification ordinance is still in effect.

We look forward to direction from your office concerning this issue, as it affects the design of many building components.

Feel free to call with any questions you may have.

Sincerely,

Jeffrey E. Cobble, AIA
Executive Vice President
HARVARD JOLLY CLEES TOPPE ARCHITECTS, P.A., AIA

JEC/dar

xc: Yvette V. London – HJCT
Jorge Fernandez – Cabana & Fernandez

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2714 Ninth St. N.
St. Petersburg, FL
33704

727/896 4611
AA C000119

CF CABANA AND FERNANDEZ STRUCTURAL CONSULTANTS, P.A.

C.A. 4328

April 24, 2003

MONROE COUNTY
CONSTRUCTION MANAGEMENT
MAY 05 2003
TIME: Hand Delivered
RECEIVED BY:

Ms. Yvette London, A.I.A.
HARVARD, JOLLY, CLEES, TOPPE ARCHITECTS
2714 9TH STREET NORTH
ST. PETERSBURG, FL 33704

RE : MONROE COUNTY MEDICAL EXAMINER BLDG
CF # : A0073.00

Dear Yvette:

This is to cover two current issues:

Requirements for Slab Supports: The Geotechnical Report states that the use of piles has two purposes, providing resistance to wind uplift and overturning, and preventing the structure from collapsing as a result of the fill washing away during a tidal surge event. Recently we asked for an opinion regarding the use of piles for the breezeway slab. The response from the Geotechnical Engineer seems to imply that piles would not be required in this area. Following the previous recommendations regarding the building, it appears that the breezeway slab is to be treated in the same category as a sidewalk and that, therefore, it is conceivable that it would be allow to perish in the event of a tidal surge. We will follow this concept and not provide any piling under this slab. If this is not what you and/or the Owner want to have, please indicate so.

Wind Design Requirements: I would like to again relate the history of this issue. Up through the early to middle 90's the US Weather Service collected wind data using a system known as the "fastest mile wind speed". All the codes of the time had their requirements and equations set to work with that data. Then a change was made to a new system referred to as the "3-second gust velocity". Without going into the complicated reasons behind this change, we will say that the new velocities were generally 20 miles per hour faster than the corresponding values for the same or similar locations. ASCE-7 adopted the new system in the 1995 edition of the code. In doing so, the tables of coefficients for use in the calculation formulas were adjusted downwards. This was done so that the resulting pressures, calculated with the new (higher) velocities, would produce comparable pressures to those obtained with the previous versions of the code. Consequently, the present coefficient tables and formulas are set to work with "3 second gust velocities", not with "fastest mile velocities".

The design velocity for the category 5 hurricane expressed in the Monroe County ordinance is in term of "fastest mile" velocities. This was current in codes prior to 1995, but it is no longer so. Since the present day coefficient tables and formulas no longer reflect these values, their 170 mph figure would have to be first translated to its equivalent in terms of a "3-second gust velocity",

The Florida Building Code provides a table for converting between the two velocity systems. This table indicates that, in general, the two systems differ by the same 20 miles per hour mentioned above. However, the highest "fastest mile" velocity figure in this table is 130 mph, which translates to a "3-sec gust velocity" of 150 mph. A mathematically correct translation of a "fastest mile" velocity of 170 mph to "3-sec gust" equivalent is therefore not possible using the official table. If we were to use a simple extrapolation (which is not always mathematically correct), the equivalent figure would be 170 + 20 = 190 mph. As we have previously stated, the current Florida Code and ASCE-7 velocity requirement for Monroe County, in terms of 3-second gust velocity, is 150 mph. This would, therefore, be an increase of 40 mph over what the code requires. Although the Owner has the right to design the building for whatever velocity he wishes, as long as it is higher than the code minimum, we would like to warn you of the cost impact of such decision, which would be large.

April 24, 2003

Ms. Yvette London, A.I.A.
MONROE COUNTY MEDICAL EXAMINER BLDG

As a comment, for purposes of comparison, I would like to mention that the Florida Code, in the chapter dedicated to special requirements for schools, recommends (not a mandatory) that all new Enhanced Hurricane Shelters be designed for a velocity 40 mph higher than all other buildings in the zone. For Monroe County this would be 150 + 40 = 190 mph, which is, as mentioned above, the rough equivalent of the 170 mph figure in the old ordinance.

Before we commit to one design or the other, please review this matter once more to make sure everyone understands what we are doing. In order to keep the pace I need an answer at the latest by the middle of next week.

Sincerely

Jorge Fernandez, P.E.
CABANA AND FERNANDEZ STRUCTURAL CONSULTANTS, P.A.

CF